Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (**Currently Amended**) A method of arranging image data representing a motion picture sequence within a memory sub-system in an image data processing system, the method comprising using ~~dedicated hardware and/or a processor~~ a decoder to dynamically select the arrangement of image data for successive pictures of said sequence in said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates for a cache memory in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein measured characteristics of the image data at one part of the sequence are used to predict characteristics of a subsequent portion of the sequence, and the memory arrangement is controlled according to measured characteristics of recently processed portions of the sequence.

2. (**Previously Presented**) A method as claimed in claim 1, wherein said memory sub-system includes an image data storage memory constructed from paged memory.

3. (**Previously Presented**) A method as claimed in claim 1, wherein said memory sub-system includes a processor cache memory in addition to a main image data storage memory.

4. (**Previously Presented**) A method as claimed in claim 1, wherein the step of selecting the arrangement of image data in storage memory comprises selecting between a linear format, whereby image data is stored in the memory sub-system on a line-by-line basis, and at least one kind of tiled format, whereby two-dimensional groups of pixels are grouped in the memory sub-system.

5. (**Previously Presented**) A method as claimed in claim 4 wherein the memory sub-system includes cache memory, said tiled format is defined such that data for one tile corresponds to a whole number of cache blocks.

6. (**Canceled**)

7. (**Previously Presented**) A method as claimed in claim 1, wherein the method looks ahead in the motion picture sequence so as to measure said characteristics of the image data for a given portion of the sequence and selects the memory arrangement prior to processing that portion.

8. (**Canceled**)

9. (**Currently Amended**) A method as claimed in claim 1 wherein the method further comprises ~~ing~~ averaging over a period of time the measurement of image data characteristics.

10. (**Previously Presented**) A method as claimed in claim 45, wherein the variability of motion vectors is measured separately between vertical and horizontal planes, each having a different effect in the selection of the storage arrangement.

11. – 12. (**Canceled**)

13. (**Previously Presented**) A method as claimed in claim 1, wherein the method includes the system performance measurement, and wherein the system performance is measured on a test basis using a sample of data, prior to processing the data.

14. (**Previously Presented**) A method as claimed claim 1, wherein the method includes the system performance measurement, and wherein the system performance measured while processing a first part of the sequence is used in selecting the arrangement of memory for a subsequent part of the sequence.

15. (**Previously Presented**) A method as claimed in claim 1, wherein the method comprises using knowledge of subsequent processing steps to influence the selection of the arrangement of data in the memory sub-system.

16. (**Original**) A method as claimed in claim 1, wherein the selection of memory arrangement is implemented at least partly by changing parameters used by memory-accessing program code.

17. (**Previously Presented**) A method as claimed in claim 1, wherein the selection of memory arrangement is implemented at least partly based upon a selection of different versions of code to be executed.

18. (**Previously Presented**) A method as claimed in claim 1, wherein the memory sub-system includes processor cache memory in addition to main image data storage memory, and wherein the selecting is performed using cache-handling functions.

19. (**Previously Presented**) A method as claimed in claim 18, wherein a block allocation function, whereby a new cache-block is allocated and overwritten without pre-loading the new cache-block from the main memory, is used selectively according to said measured characteristics.

20. (**Original**) A method as claimed in claim 18, wherein, in addition, cache pre-fetching is activated selectively in accordance with the measured characteristics.

21. – 22. (**Canceled**)

23. (**Currently Amended**) A system as claimed in claim ~~22~~ 25, wherein the memory sub-system includes an image data storage memory constructed from paged memory.

24. (**Currently Amended**) A system as claimed in claim ~~23~~ 34, wherein said memory sub-system includes a processor cache memory in addition to an image data storage memory.

25. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22,~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the decoder ~~means for selecting the arrangement of image data in said memory sub-system~~ is arranged for selecting between a linear format, whereby image data is stored in the memory sub-system on a line-by-line basis, and at least one kind of tiled format, whereby two-dimensional groups of pixels are grouped in the memory sub-system.

26. (**Previously Presented**) A system as claimed in claim 25, wherein where the memory sub-system includes cache memory, said tiled format is defined such that data for one tile corresponds to a whole number of cache blocks.

27. (**Canceled**)

28. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22,~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the decoder ~~means for dynamically selecting~~ is arranged to look ahead in the motion picture sequence so as to measure said characteristics of the image data for a given portion of the sequence and select the memory arrangement prior to processing that portion.

29. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22,~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the decoder ~~means for dynamically selecting~~ is arranged such that measured characteristics of the image data at one part of the sequence are used effectively to predict characteristics of a subsequent portion of the sequence, and the memory arrangement controlled according to measured characteristics of recently processed portions of the sequence.

30. (**Currently Amended**) A system as claimed in claim ~~22~~ 34, wherein the measuring ~~means~~ component ~~includes means for averaging~~ averages measured image data characteristics over period of time.

31. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22, wherein~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

the processing system further including:

a measuring ~~means is~~ component arranged to measure variability of motion vectors, wherein the measuring ~~means~~ component is arranged to ~~do so~~ measure

separately between vertical and horizontal planes, each having a different effect in the selection of the storage arrangement.

32. – 33. (**Canceled**)

34. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22, wherein~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

the processing system further including:

a measuring component that ~~means for~~ measures ~~ing~~ system performance ~~is arranged to do so~~ at least partly on a test basis using a sample of data, prior to processing the data.

35. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22,~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the decoder ~~selecting means~~ and a measuring component that ~~means for~~ measures ~~ing~~ system performance are arranged such that system performance measured while processing a first part of the sequence is used to influence the arrangement of the memory sub-system for a subsequent part of the sequence.

36. (**Currently Amended**) An image data processing system, ~~as claimed in claim 22,~~ the processing system including a memory sub-system and a decoder that dynamically selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the decoder ~~selecting means~~ uses knowledge of a set of subsequent processing steps to influence the selection of the arrangement of data in the memory sub-system.

37. (**Currently Amended**) A system as claimed in claim ~~22~~ 34, wherein the ~~selecting means~~ decoder comprises dedicated hardware and/or a processor.

38. (**Currently Amended**) A system as claimed in claim ~~22~~ 28, wherein the ~~selecting means~~ decoder is implemented at least partly by means for changing parameters used in accessing said memory sub-system.

39. (**Currently Amended**) A system as claimed in claim 22 29, wherein the ~~selecting means~~ decoder comprises dedicated hardware or a processor.

40. (**Currently Amended**) A system as claimed in claim ~~22~~ 34, wherein the memory sub-system includes a processor cache memory in addition to main image data storage memory, and wherein the selecting is performed using cache-handling functions.

41. (**Currently Amended**) An image data processing system, ~~as claimed in claim 40,~~ the processing system including a memory sub-system and a decoder that dynamically

selects the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein the memory sub-system includes a processor cache memory in addition to main image data storage memory, and wherein the selecting is performed using cache-handling functions;

wherein the system is arranged such that a block allocation function, whereby a new cache-block is allocated and overwritten without pre-loading the new cache-block from the main memory, is selectively used according to said measured characteristics.

42. (**Currently Amended**) A system as claimed in claim ~~40~~ 41, wherein the system is arranged such that cache pre-fetching is activated selectively in accordance with the measured characteristics.

43. (**Canceled**)

44. (**Currently Amended**) A non-transitory computer readable instruction medium with instructions for causing a data processing system to implement a method of arranging image data representing a motion picture sequence within a memory sub-system in an image data processing system, the method comprising:

dynamically selecting the arrangement of image data for successive pictures of said sequence in said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system includes at least one of:

data cache stall rates for a cache memory in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a data file;

wherein measured characteristics of the image data at one part of the sequence are used to predict characteristics of a subsequent portion of the sequence, and the memory arrangement is controlled according to measured characteristics of recently processed portions of the sequence.

45. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 25, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the variability of motion vectors encoded within received data.

46. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 26, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the picture type.

47. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 28, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the image resolution.

48. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 29, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said

processing system comprise the data cache stall rates for a cache memory in the memory sub-system.

49. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 31, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the processor utilization.

50. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 31, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the quality of service or other qualitative measurements that are perceptible to an end user of content being processed.

51. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 35, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the bandwidth of a link feeding data into or out of said image processing system.

52. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 41, wherein the ~~dynamic selection is performed according to~~ known characteristics comprise the encoded data size per picture of the sequence.

53. (**Currently Amended**) The ~~method~~ system of claim ~~22~~ 41, wherein the ~~dynamic selection is performed according to~~ known characteristics comprise the advance information relating to the content of the image stream contained in a data file.

54. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the variability of motion vectors encoded within received data.

55. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the picture type.

56. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of said image data comprise the image resolution.

57. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the data cache stall rates for a cache memory in the memory sub-system.

58. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the processor utilization.

59. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the quality of service or other qualitative measurements that are perceptible to an end user of content being processed.

60. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ measured characteristics of the performance of said processing system comprise the bandwidth of a link feeding data into or out of said image processing system.

61. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ known characteristics comprise the encoded data size per picture of the sequence.

62. (**Currently Amended**) The system of claim ~~22~~ 34, wherein the ~~dynamic selection is performed according to~~ known characteristics comprise the advance information relating to the content of the image stream contained in a data file.